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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/622,467	07/21/2003	Pil Heon Choi	HI-0169	4533

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EXAMINER	
TRAN, QUOC DUC	
ART UNIT	PAPER NUMBER
2643	

DATE MAILED: 10/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/622,467	CHOI, PIL HEON	
	Examiner	Art Unit	
	Quoc D. Tran	2643	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 July 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *21 July 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. Where applicant acts as his or her own lexicographer to specifically define a term of a claim contrary to its ordinary meaning, the written description must clearly redefine the claim term and set forth the uncommon definition so as to put one reasonably skilled in the art on notice that the applicant intended to so redefine that claim term. *Process Control Corp. v. HydReclaim Corp.*, 190 F.3d 1350, 1357, 52 USPQ2d 1029, 1033 (Fed. Cir. 1999). The term "Convergency" in claims is used by the claim to mean "Interface", while the accepted meaning is "to meet." The term is indefinite because the specification does not clearly redefine the term.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-24 are rejected under 35 U.S.C. 102(e) as being anticipated by Lung et al (6,493,439).

Consider claim 1, Lung et al teach an apparatus for transmitting and receiving CID (Caller ID) in a PBX (col. 2 lines 45-55), the apparatus comprising: an Analog Trunk Convergency (ATC) unit for converging with an exchange in the PBX connected to the exchange (col. 4 lines 61-65); a Subscriber Line Convergency (SLC) unit for transmitting CID and/or data by converging with a subscriber line connected to each port (col. 4 lines 64-67); a control block

for controlling a CID service for the analog trunk and the subscriber line units (col. 5 lines 5-13); a data path control block for controlling data transmission through a data path between the ATC unit and the SLC unit (col. 5 lines 30-37); a signal transmitting/detecting block for performing signal transmitting and/or detecting through the data path; and a switching block for connecting the data path between a CID service unit, the CID service unit providing CIDs and/or system tones through a digital signal process, and the ATC and SLC units, and for selectively switching the data path between the signal transmitting/detecting block and the CID service unit (col. 5 line 38 – col. 6 lines 53).

Consider claim 2, Lung et al teach wherein the ATC unit comprises: a plurality of ports, each port comprising a converting block for converting the CID received from a public exchange through a subscriber line or office line into analog data and transmitting the data to the switching block through a highway as a data path, a ring detecting block for detecting a ring signal received from the public exchange through the subscriber line, and a holding line for establishing and holding the subscriber line; and a local detecting block connected to the ports, for controlling CID transmission through a system path (col. 6 lines 8-53).

Consider claim 3, Lung et al teach wherein the SLC unit comprises: a plurality of ports, each of the ports comprising: a converting block for converting the CID transmitted through the switching block into a digital signal, a ring transmitting block for transmitting a ring to an affected receiver terminal in response to a ring transmission message from the local control block, and an off-hook detecting block for detecting off-hook status of the affected terminal of a receiver; and a local control block for controlling the transmission of the CID transmitted through a system bus (col. 6 lines 8-53).

Consider claim 4, Lung et al teach an apparatus for transmitting and receiving a Caller ID (CID) in a Private Branch Exchange (PBX), to detect the CID or a system signal for a transmitted or received call at an Analog Trunk Convergency (ATC) unit and a Subscriber Line Convergency (SLC) unit and to transmit the detected data or signal to a receiver terminal (col. 2 lines 45-55; col. 4 lines 61-67), the apparatus comprising: a CID detecting block for detecting the signal and/or the CID received through a highway as a data path connected by a switching block, and storing the signal and/or the CID in a corresponding area per port inside a CID detection memory block; a CID transmitting block for transmitting the CID to an affected receiver terminal through the highway as the data path; a CID detection memory for assigning a memory area to each of subscriber ports of the SLC unit and storing the signal and/or the CID for a corresponding port; a CID transmitting memory for storing a system signal and/or a CID in each port, in order to transmit a predetermined CID to an affected receiver terminal when a ring signal is transmitted to the affected receiver terminal; and a local control block for controlling CID transmission to a corresponding port in the SLC unit through a system bus by reading the signal and/or the CID of each port from the CID detection memory (col. 5 line 65 – col. 6 line 17; col. 6 line 65 – col. 7 line 57).

Consider claim 5, Lung et al teach wherein the CID detecting block comprises: a highway convergency block for receiving the signal and/or the CID by converging with the data path connected by the switching block; a CID detecting block for detecting the CID received from the highway convergency block; a system signal detecting block for detecting a system signal transmitted to the highway convergency block; and a memory interface block for interfacing with the CID detection memory, to store the CID detected by the CID detecting block

and the signal detected by the system signal detecting block in a predetermined memory area of a corresponding port (col. 6 line 65 – col. 7 line 57).

Consider claim 6, Lung et al teach wherein the CID transmitting block comprises: a memory interface block for interfacing CID that is transmitted from the CID transmitting memory; a CID transmitting block for transmitting the CID from the CID transmitting memory to a highway convergency block, in order to transmit the CID to the switching block; a system signal transmitting block for transmitting the system signal received from the CID transmitting memory; and a highway convergency block for transmitting the signal and/or the CID by converging with the highway as the data path connected to the switching block (col. 6 line 65 – col. 7 line 57).

Consider claim 7, Lung et al teach a method for transmitting and receiving a Caller ID (CID) in a Private Branch Exchange (PBX) (col. 2 lines 45-55), the method comprising: establishing a line with the PBX through a general switched telephone network (col. 6 lines 65-60); converting a received data through the line, and storing the data through a switching block in a CID service unit comprised of at least one memory (col. 6 line 65 – col. 7 line 24); and transmitting all or part of the stored CID to a terminal, through the switching block and/or a Subscriber Line Convergency (SLC) block and display the CID on the terminal (col. 7 lines 25-45).

Consider claim 8, Lung et al teach a method for transmitting and receiving a Caller ID (CID) in a Private Branch Exchange (PBX) (col. 2 lines 45-55), the method comprising: storing CIDs in a first memory; storing preassigned CIDs out of the stored CIDs for transmission in a

second memory; and transmitting the CIDs stored in the second memory to a caller ID terminal through a switching block and/or a Subscriber Line Convergency (SLC) unit (col. 7 lines 9-45).

Consider claim 9, Lung et al teach wherein the CIDs are stored in a caller detection memory which is the first memory of the CID service block (col. 7 lines 9-12).

Consider claim 10, Lung et al teach wherein a system control block stores the preassigned CIDs out of the stored CIDs for transmission in a CID transmitting memory which is the second memory, through a control block of a CID service unit (col. 7 lines 9-45).

Consider claim 11, Lung et al teach wherein storing CIDs in the first memory comprises: receiving a ring from a public exchange to an Analog Trunk Convergency (ATC) unit in a PBX; detecting, at a ring detecting block, whether the ring is received, and reporting, at a local control block, to a system control block through a system bus regarding the reception of the ring; if receiving the ring is reported, connecting, at the system control block in the PBX, a highway as a data path of a corresponding port to a highway of a Caller ID (CID) service unit through a switching block; detecting, at a CID detecting block, the CID through a highway convergency block based on a predetermined signal; and storing the detected CID in a predetermined area per port in a CID detection memory, through a memory interface block (col. 6 line 56 – col. 7 line 45).

Consider claim 12, Lung et al teach wherein storing prearranged CIDs for transmission in the second memory comprises: if receiving the call is reported from the Analog Trunk Convergency (ATC) unit, transmitting, at a system control block, a ring transmission message to a local control block in a Subscriber Line Convergency (SLC) unit using a system bus through a system bus control block, and simultaneously, transmitting a system signal and/or a caller ID

message; and if the local control block receives at least one of the ring transmission message, the system signal, and the caller ID message, transmitting, at the local control block, the signal and/or storing the system signal and the caller ID in a caller ID transmitting memory (col. 6 line 56 – col. 7 line 45).

Consider claim 13, Lung et al teach the method further comprising: displaying the transmitted CIDs on the caller ID terminal (col. 7 lines 44-45).

Consider claim 14, Lung et al teach a method for transmitting and receiving a Caller ID (CID) in a Private Branch Exchange (PBX) (col. 2 lines 45-55), the method comprising: receiving a ring from a public exchange to an Analog Trunk Convergency (ATC) unit in a PBX; detecting, at a ring detecting block, whether the ring is received, and reporting, at a local control block, the reception of the ring to a system control block through a system bus; if receiving the call is reported, connecting, at the system control block in the PBX, a highway as a data path of a corresponding port to a highway of a Caller ID (CID) service block through a switching block (col. 6 lines 56-64); detecting, at a CID detecting block, the CID through a highway convergency block based on a predetermined signal (col. 6 lines 60-67); storing the detected CID in a predetermined area per port in a CID detection memory, through a memory interface block if receiving the call is reported from the ATC unit, transmitting, at a system control block, a ring transmission message to a local control block in a Subscriber Line Convergency (SLC) unit using a system bus through a system bus control block, and simultaneously, transmitting a system signal and/or a caller ID message; if the local control block receives at least one of the ring transmission message, the system signal, and the caller ID message, transmitting, at the local control block, the signal and/or storing the system signal and the caller ID in a caller ID

transmitting memory; reading, at a system control block, the system signal and/or the CID stored in the CID transmitting memory, and transmitting the CID to the SLC unit through a switching block and a system bus; and if the local control block in the SLC unit provides the CID to a corresponding port, transmitting the CID through a subscriber line and displaying the CID on a caller ID phone at a subscriber side (col. 6 line 56 – col. 7 line 45).

Consider claim 15, Lung et al teach a communication system comprising: a first memory in a network exchange configured to receive and store a Caller ID (CID); a second memory configured to store preassigned CIDs out of the stored CIDs for transmission; and a switching block configured to transmit the CIDs stored in the second memory to a caller ID terminal (col. 7 lines 9-45).

Consider claim 16, Lung et al teach the communication system further comprising: a Subscriber Line Convergency (SLC) unit configured to receive the CIDs from the switching block and to route the CIDs to the caller ID terminal (col. 7 lines 9-45).

Consider claim 17, Lung et al teach wherein the first memory is a caller detection memory of a CID service block (col. 7 lines 9-12).

Consider claim 18, Lung et al teach wherein the second memory is a CID transmitting memory (col. 7 lines 9-12).

Consider claim 19, Lung et al teach the communication system further comprising: a system control block configured to store the preassigned for transmission in the CID transmitting memory, through a control block of a CID service unit (col. 7 lines 9-45).

Consider claim 20, Lung et al teach the communication system further comprising: an Analog Trunk Convergency (ATC) unit configured to receive a ring from a public exchange; a

ring detecting block configured to detect whether the ring is received, and to report the reception of the ring; a system control block in the network exchange, configured to connect a data path of a corresponding port to a Caller ID (CID) service unit through a switching block, if the ring is reported as received; a CID detecting block configured to detect the CID through a highway convergency block based on a predetermined signal; and a memory interface block configured to store the detected CID in a predetermined area per port in a CID detection memory (col. 6 line 56 – col. 7 line 45).

Consider claim 21, Lung et al teach the communication system further comprising: a system control block configured to transmit a ring transmission message to a local control block in a Subscriber Line Convergency (SLC) unit, and to transmit a system signal and/or a caller ID message, if the call is reported from an Analog Trunk Convergency (ATC) unit as received; and wherein the second memory id configured to store a system signal and/or caller ID, if the local control block receives at least one of the ring transmission message, the system signal and caller ID (col. 6 line 56 – col. 7 line 45).

Consider claim 22, Lung et al teach wherein the system control block is configured to transmit the ring transmission message and to transmit the system signal simultaneously (col. 7 lines 35-38).

Consider claim 23, Lung et al teach wherein the network exchange is a Private Branch Exchange (PBX) (col. 2 lines 45-55).

Consider claim 24, Lung et al teach wherein the caller ID terminal is a phone configured to display the CID (col. 4 lines 14-16).

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

5. Any response to this action should be mailed to:

Mail Stop ____(explanation, e.g., Amendment or After-final, etc.)
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Facsimile responses should be faxed to:

(571) 273-8300

Hand-delivered responses should be brought to:
Customer Service Window
Randolph Building
401 Dulany Street
Alexandria, VA 22314

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Quoc Tran** whose telephone number is **(571) 272-7511**. The examiner can normally be reached on M, T, TH and Friday from 8:00 to 6:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Curtis Kuntz**, can be reached on **(571) 272-7499**.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the **Technology Center 2600** whose telephone number is **(571) 272-2600**.

QUOC TRAN
PRIMARY EXAMINER

AU 2643
October 25, 2005